

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference FI-4404	<b>FOR FURTHER ACTION</b>	See item 4 below
International application No. PCT/JP2004/014559	International filing date ( <i>day/month/year</i> ) 28 September 2004 (28.09.2004)	Priority date ( <i>day/month/year</i> ) 09 October 2003 (09.10.2003)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant IDEMITSU KOSAN CO., LTD.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i> .1(a).																								
2.	This REPORT consists of a total of 4 sheets, including this cover sheet.  In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Box No. I</td> <td style="width: 60%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 338 82 70	<table style="width: 100%;"> <tr> <td style="width: 50%;">Date of issuance of this report 26 June 2006 (26.06.2006)</td> <td style="width: 50%;">Authorized officer  <b>Masashi Honda</b></td> </tr> <tr> <td colspan="2">e-mail: pt08@wipo.int</td> </tr> </table>	Date of issuance of this report 26 June 2006 (26.06.2006)	Authorized officer  <b>Masashi Honda</b>	e-mail: pt08@wipo.int	
Date of issuance of this report 26 June 2006 (26.06.2006)	Authorized officer  <b>Masashi Honda</b>				
e-mail: pt08@wipo.int					

# PATENT COOPERATION TREATY

TRANSLATION

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference

**FI-4404**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/JP2004/014559**

International filing date (day/month/year)

**28.09.2004**

Priority date (day/month/year)

**09.10.2003**

International Patent Classification (IPC) or both national classification and IPC

Applicant

**IDEMITSU KOSAN CO., LTD.**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/014559

Box No. I      Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐

This opinion has been established on the basis of a translation from the original language into the following language  
\_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

- a. type of material

☐

a sequence listing

☐

table(s) related to the sequence listing

- b. format of material

☐

in written format

☐

in computer readable form

- c. time of filing/furnishing

☐

contained in the international application as filed.

☐

filed together with the international application in computer readable form.

☐

furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/JP2004/014559

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
<b>1. Statement</b>			
Novelty (N)	Claims		YES
	Claims	1 - 9	NO
Inventive step (IS)	Claims		YES
	Claims	1 - 9	NO
Industrial applicability (IA)	Claims	1 - 9	YES
	Claims		NO
<b>2. Citations and explanations:</b>			
<p>Document 1: WO, 2003-002659, A1 (Toyo Kasei Kogyo Co., Ltd.), 9 January, 2003 (09.01.03), claims; pages 4, 6, 12 &amp; WO, 2003-002659, A1</p> <p>Document 2: JP, 8-50447, A (Exxon Chemical Patents Inc.), 14 May, 1996 (14.05.96), claims: pages 10, 13, 23 &amp; US, 5567344, A &amp; US, 5663129, A</p> <p><b>Claim 1</b></p> <p>The invention described in claim 1 does not appear to be novel nor to involve an inventive step. The polyolefin described in claim 1 is produced by polymerization of at least one kind of <math>\alpha</math>-olefin having 10 or more carbon atoms. The polyolefin described in documents 1-2 is also produced by polymerization of <math>\alpha</math>-olefin having 10 or more carbon atoms, and the catalysts used for polymerization in the inventions described in both claim 1 and documents 1-2 are also polymerized by the use of a biscyclopentadienyl derivative with an olefin having carbon atoms of decene or more as a catalyst (see pages 4 and 6 of document 1, and pages 10 and 13 of document 2). It is described in documents 1-2 that this polymer is denatured by the use of, for example, maleic anhydride and a decomposition drug is used in combination (see claims and examples in document 1 and claims in document 2). It is not found that difference is brought about among polymers obtained and that difference is brought about in the side chain crystalline property, one of physical properties of those polymers.</p> <p><b>Claims 2, 5</b></p> <p>The inventions described in claims 2-5 do not appear to be novel nor to involve an inventive step. The olefin polymer of the inventions described in claims 2-5 restricts the olefin polymer described in claim 1 with regard to a producing method, weight-average molecular weight and molecular weight distribution, but the producing method is described in documents 1-2 as mentioned above. Weight-average molecular weight and molecular weight distribution are also described in documents 1-2. It is not recognized that difference is brought about in these matters.</p> <p><b>Claims 6-9</b></p> <p>The inventions described in claims 6-9 do not appear to be novel nor to involve an inventive step. The inventions described in claims 6-9 are methods of producing an olefin polymer. As sated above, documents 1-2 describe the same things about a monomer, a catalyst, a decomposition drug, a polar compound, and a halogen compound, and difference is not found as a process for production.</p>			